

REMARKS

Claims 1 – 36 are pending in the application and stand rejected. Applicants respectfully request reconsideration and allowance of all pending claims.

Claims 1 and 17 stand rejected under Section 103 as being unpatentable over U.S. Patent No. 5,734,724 issued to Kinoshita in view of U.S. Patent No. 6,452,600 issued to Munson, or U.S. Patent No. 4,720,850 issued to Oberlander, or U.S. Patent No. 5,379,280 issued to Cotton. Claim 26 stands rejected under Section 103 as being unpatentable over Kinoshita in view of U.S. Patent No. 6,008,838 to Iizawa and U.S. Patent No. 4,558,180 issued to Scordo. Claim 34 stands rejected under Section 103 as being unpatentable over U.S. Patent No. 5,883,944 issued to Burke in view of Scordo.

Kinoshita discloses an audio communications control unit that switches left and right channel audio signals to reproduce the audio channels at a terminal.

Iizawa discloses a multi-point control unit (MCU) that switches audio signals involved in a single video conference.

Scordo discloses a programmable audio mixer for mixing conference locations with matrix multiplication.

Munson, Oberlander and Cotton disclose switches that allocate ports to terminals in support of conference calls.

Claim 1 as amended recites, in part, "receiving audio signals from communications terminals at a centralized location having pooled digital signal processing resources assigning a portion of the pooled resources to each audio signal."

Claim 17 as amended recites, in part, "a signal processing (SP) module having digital signal processing resources for performing signal processing on the received audio signals under direction of the CSM to produce processed audio signals, the CSM operable to assign audio signals to the digital signal processing resources."

Claim 26 as amended recites, in part, "a centralized signal processing (SP) module for performing SP on the audio signals received from the plurality of distributed communications terminals responsive to the room models associated with the communications terminals from which the audio signals were received, to produce processed audio signals."

Claim 34 recites, in part, "responsive to determining that the distributed communications terminal is active, allocating a portion of the central pool of signal processing resources to processing a signal from the communications terminal."

Applicants respectfully refer the Examiner's attention to Figures 1 and 2 of the specification and the related description. Applicants' specification makes clear that signal processing resources (DSP) conventionally located on telephone terminals to prevent feedback loops forming between the microphone and the speaker are instead centrally located as pooled signal processing resources. Each of Applicants' independent Claims 1, 17, 26 and 34 recite a limitation of pooled or centralized signal processing. The references cited by the Examiner fail to teach, disclose or suggest a centralized pool of signal processing resources allocated to audio signals of distributed communications terminals. The Examiner's rejection appears to confuse allocation of switching resources, such as ports assigned to mix conference calls, with signal processing that adjusts the values of a signal to correct feedback errors. For instance, Applicant respectfully directs the Examiner's attention to Claim 1, which recites separate steps of processing signals and formulating a mix. Yet the Examiner's rejection of Claim 1 relies on the disclosure of Kinoshita to formulate a mix without pointing out a disclosure of the separate processing step. Further, the Examiner has failed to specifically identify any motivation to combine the cited references. The Examiner's cited motivation of "avoiding interference and conflicts when utilizing resources," is an advantage seen through hindsight in view of Applicants' disclosure and is not found in any reference cited by the Examiner. In conventional systems having DSP at the terminal, no allocation occurs because each terminal has its own resources. Certainly, no motivation exists for combining the specific processing recited by the dependent claims, such as room modeling and acoustic cancellation. The Examiner's rejection of the other independent Claims fails for similar reasons. Accordingly, Applicants respectfully submit that all of pending Claims 1-36 are allowable.


CONCLUSION

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being sent via facsimile on March 8, 2004.


Attorney for Applicant(s) 8 March 2004
Date of Signature

Respectfully submitted,


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